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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,928	10/22/2001	Steven M. Knowles	10765-015001	8524

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WASHINGTON, DC 20005-3500

EXAMINER

FLANDRO, RYAN M

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 05/20/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,928

Applicant(s)

KNOWLES, STEVEN M.

Examiner

Ryan M Flandro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 12.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

1. Prosecution on the merits of this application is reopened on claims 1-10 and 12, which claims are considered unpatentable for the reasons indicated below. The finality of the previous Office action (paper no. 7) is hereby withdrawn and the indication of allowable subject matter presented in the Advisory Action (paper no. 9) is vacated in light of newly discovered prior art.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Shames et al (US 2,971,701) (Shames).

a. Claim 1. Shames clearly shows and discloses a flexible joint assembly **100** for conducting a fluid comprising a joint assembly inlet (upper-left portion of assembly **100** in figure 5), a joint assembly outlet (lower-right portion of assembly **100** in figure 5), a fluid flow path between the inlet and the outlet, the fluid flow path including a first pivot joint (structure including ball member **106** and nut **76'**), a second pivot joint (structure including ball member **108** and nut **76''**), and a central fluid conductor **102** fluidly coupling the pivot joints, wherein the pivot joints together provide greater than a 60 degree bend between the inlet and the outlet and each pivot joint independently provides

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greater than a 35 degree bend in the fluid flow path (see figure 5; column 2 lines 17-22; column 4 line 60 – column 5 line 35).

b. Claim 2. Shames further shows and discloses each of the first pivot joint and the second pivot joint independently comprises a ball **106, 108** and socket **76', 76''** joint (see figure 5; column 4 line 60 – column 5 line 35).

c. Claim 3. Shames further shows and discloses that each ball and socket joint comprises a socket **76', 76''**, a ball **106, 108** received in the socket **76', 76''**, and a seal **86', 86''** between the ball **106, 108** to the socket **76', 76''** (figure 5; column 4 line 60 – column 5 line 35).

d. Claim 4. Shames shows and discloses each ball and socket joint further comprising a compressing member **62** axially compressing the seal **64** between the ball **106, 108** and the socket **76', 76''** (figures 2, 3, 5; column 3 lines 41-75).

e. Claim 5. Shames further shows and discloses each compressing member **62** comprises a retaining ring **66** compressing the seal **64** between the ball **106, 108** and the socket **76', 76''** (see figure 2; column 1 lines 71-97).

f. Claim 6. Shames further shows and discloses the central fluid conductor **102** couples to a first ball **106** of the first pivot joint and a second ball **108** of the second pivot joint (see figure 5).

g. Claim 7. Shames further shows and discloses the first pivot joint and the second pivot joint together provide a substantially 90 degree bend between the inlet and the outlet (see figure 5; column 2 lines 17-22).

- h. Claim 8. Shames further shows and discloses said central fluid conductor **102** being unitary (figure 5).
 - i. Claim 9. Shames further shows the central fluid conductor **102** being shorter than 10 centimeters (see figure 5).
 - j. Claim 10. Shames shows and discloses the joint assembly inlet and the joint assembly outlet include a fitting (see threads on **76',76"** in figure 5).
 - k. Claim 12. Shames lastly shows and discloses each pivot joint independently provides greater than a 40 degree bend in the fluid flow path (see figure 5).
4. Claims 1-10 and 12 are alternatively rejected under 35 U.S.C. 102(b) as being anticipated by Coutu (US 1,914,736).
- a. Claim 1. Coutu clearly shows and discloses a flexible joint assembly for conducting a fluid comprising a joint assembly inlet **16**, a joint assembly outlet **16**, a fluid flow path between the inlet **16** and the outlet **16**, the fluid flow path including a first pivot joint (left structure of figures 1 and 2), a second pivot joint (right structure of figures 1 and 2), and a central fluid conductor **2** fluidly coupling the pivot joints, wherein the pivot joints together provide greater than a 60 degree bend between the inlet **16** and the outlet **16** and each pivot joint independently provides greater than a 35 degree bend in the fluid flow path (see figures 1 and 2; column 1 lines 1-18; columns 2-3).
 - b. Claim 2. Coutu further shows and discloses each of the first pivot joint and the second pivot joint independently comprises a ball **13** and socket **1,2,3** joint (see figures 1 and 2; column 1 line 10).

c. Claim 3. Coutu further shows and discloses that each ball and socket joint comprises a socket **1,2,3**, a ball **13** received in the socket **1,2,3**, and a seal **4, 11** between the ball **13** to the socket **1,2,3** (figures 1 and 2; column 2 lines 60-70; column 3 lines 12-27).

d. Claim 4. Coutu further shows and discloses each ball and socket joint further comprising a compressing member **8** axially compressing the seal **4,11** between the ball **13** and the socket **1,2,3** (see figure 2; column 1 lines 71-97).

e. Claim 5. Coutu further shows and discloses each compressing member **8** comprises a retaining ring **8** compressing the seal **4,11** between the ball **13** and the socket **1,2,3** (see figure 2; column 1 lines 71-97).

f. Claim 6. Coutu further shows and discloses the central fluid conductor **2** couples to a first ball **13** of the first pivot joint and a second ball **13** of the second pivot joint (see figures 1 and 2; column 1 lines 1-18; columns 2-3).

g. Claim 7. Coutu further shows and discloses the first pivot joint and the second pivot joint together provide a substantially 90 degree bend between the inlet **16** and the outlet **16** (see figures 1 and 2 – upon rotation of one of the joint assemblies through its full range of motion while leaving the other stationary as shown).

h. Claim 8. Coutu further shows and discloses said central fluid conductor **2** being unitary (figure 2).

i. Claim 9. Coutu further shows the central fluid conductor **2** being shorter than 10 centimeters (see figures 1 and 2).

j. Claim 10. Coutu shows and discloses the joint assembly inlet **16** and the joint assembly outlet **16** include a fitting **14** (see figures 1 and 2).

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k. Claim 12. Coutu lastly shows and discloses each pivot joint independently provides greater than a 40 degree bend in the fluid flow path (see figures 1 and 2).

Conclusion

4. Again, the finality of the previous Office action (paper no. 7) is hereby withdrawn and the indication of allowable subject matter presented in the Advisory Action (paper no. 9) is vacated in light of newly discovered prior art. Claims 1-10 and 12 are pending in the application.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to flexible joint assemblies:

U.S. Patent 5,149,146 to Simoni (see especially figure 7 – unitary central fluid conductor)

U.S. Patent 4,776,615 to Young (see figure 3; column 4 lines 17-22)

U.S. Patent 4,372,344 to Stafford (see figure 5; column 3 line 31)

U.S. Patent 1,532,195 to Morrison (see figure 2 – seal 24 and compression member 27)

U.S. Patent 861,993 to Lane (see figure 1)

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan M Flandro whose telephone number is (703) 305-6952. The examiner can normally be reached on 8:30am - 5:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on (703) 308-1159. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

RMF

May 14, 2003


Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3670